

Docket No.: 0754-0192P
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Masatoshi YOKOTA

Application No.: 10/601,652

Confirmation No.: 1286

Filed: June 24, 2003

Art Unit: 3711

For: GOLF BALL

Examiner: A. A. Hunter

REPLY BRIEF

MS Reply Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

As required under § 41.41(a)(1) and/or § 41.43(b), this brief is being timely filed within two months from the August 2, 2007, mailing date of the Examiner's Answer, and is in furtherance of the present Appeal.

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This brief contains items under the following headings as required by 37 C.F.R. § 41.37
and M.P.E.P. § 1206:

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I. STATUS OF CLAIMS

Claims 1, 2, 4, 6, 7, 9 and 11-16 are currently pending. Claims 3, 5, 8 and 10 are cancelled. No claims are withdrawn from consideration as being drawn to a non-elected invention. No claims are allowed. Claims 1, 2, 4, 6, 7, 9 and 11-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wu, U.S. Patent No. 5,908,358 (hereinafter "Wu"), in view of Iwami et al., JP 2002-078824 (hereinafter, "Iwami et al."). Claims 1, 2, 4, 6, 7, 9 and 11-16 are on appeal. Claims 1, 6 and 13 are independent claims.

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II. STATUS OF AMENDMENTS

Regarding section (4) of the Examiner's Answer, the Examiner has agreed with Appellant's previous "Status of Amendments" as shown in the Appeal Brief filed April 30, 2007.

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III. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

As to the grounds of rejection on appeal, the Examiner's Answer, section (6) is in agreement with the previously filed Appeal Brief.

The sole ground of rejection to be reviewed on appeal is whether claims 1, 2, 4, 6, 7, 9 and 11-16 are patentable under 35 U.S.C. § 103(a) over the combined disclosures of Wu and Iwami et al.

IV. ARGUMENT

The main issue to be reviewed in the present appeal is the rejection of claims 1, 2, 4, 6, 7, 9 and 11-16 under 35 U.S.C. § 103(a) as being unpatentable over Wu in view of Iwami et al.

In response to the Appeal Brief, the Examiner has issued an Examiner's Answer ("Answer") on August 2, 2007. This Reply Brief addresses the Examiner's contentions and statements from the Answer.

In section (9) of the Answer, the Examiner literally repeats the rejections from the Final Office Action of September 28, 2006, pages 2-3. Also in the Answer, the Examiner provides new comments in section (10) at pages 5-8. In the Examiner's Answer, the Examiner appears to summarize the previous position by Appellants. However, Appellant's position has been oversimplified. Further, the Examiner has failed to address all of Appellant's arguments. The following points are made in rebuttal of the Examiner's Answer.

1. The Examiner has again failed to perform a proper obviousness analysis

Graham v. John Deere, 383 U.S. 1, 17, 148 U.S.P.Q. 459, 467 (1966) has provided the controlling framework for an obviousness analysis. A proper analysis under 35 U.S.C. § 103(a) requires consideration of the four *Graham* factors of: (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims that are at issue; (3) resolving the level of ordinary skill in the pertinent art; and (4) evaluating any evidence of secondary considerations (e.g., commercial success, unexpected results). (See, *Graham v. John*

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Deere, 383 U.S. at 17, 148 U.S.P.Q. at 467). The *Graham* factor of secondary considerations has been addressed in the Appeal Brief at pages 27-34.

At page 6 of the Examiner's Answer, the Examiner maintains that the cited references disclose all of the limitations of the rejected claims, except for the "ratio of the stiffness to the hardness of the cover material." To address this deficiency in the prior art disclosure, the Examiner does not cite any other prior art. Rather, the Examiner attempts to address this lack of disclosure in Wu by stating that one of skill in the art could merely guess at the proper ratio and obtain the presently claimed invention. Such is not a proper analysis of obviousness and does not provide sufficient motivation for achieving the unexpected results of the presently claimed invention.

The Examiner has therefore not determined the level of skill in the art, has not adequately defined the limitations disclosed in the cited prior art and the defects thereof, nor properly considered the relevant secondary factors, as reflected in Appellant's objective evidence of non-obviousness.

Appellants further refer to *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988) to assert that the teaching, suggestion or motivation cannot be found in either the prior art references cited or in the knowledge generally available to one of ordinary skill in the art. Appellant has addressed this by showing that the cited references fail to provide the proper teaching, suggestion or motivation. The Supreme Court of the United States has recently held that the teaching, suggestion, motivation test is a valid test for obviousness, but one which cannot be too rigidly applied. (See *KSR International Co. v Teleflex Inc.*, No. 04-1350, slip op. at 11.

(U.S. April 30, 2007)). It remains necessary for the Examiner to identify the reason why a person of ordinary skill in the art would have combined the prior art elements *in the manner claimed*. None of this analysis is present in the Examiner's Answer. That is, while the Examiner states that one of skill in the art could somehow suddenly arrive at limitations of a golf ball cover that might fall within the presently claimed invention's limitations, the Examiner has failed to explain how or why one of skill in the art would have particularly examined golf ball covers having the specified properties of the presently claimed golf ball covers. The motivation to arrive at these specific limitations cannot be found either in the disclosure of Wu or Iwami et al. nor in the knowledge of one of ordinary skill in the art, as explained in Appellant's Appeal Brief and as further emphasized in the following points.

2. The Examiner has failed to address and/or properly weigh Appellant's objective evidence

Appellants have submitted objective evidence of non-obviousness which is commensurate in scope with the presently claimed invention and compares the closest related prior art to the presently claimed invention. Yet, this objective evidence of non-obviousness has not been considered or commented upon in the Examiner's Answer. This is further evidence that the Examiner has not properly performed a *Graham* factor analysis.

Had the Examiner considered Appellant's objective evidence of non-obviousness, the Examiner would have weighed this evidence along with the other factors of the *Graham* factor analysis. The Examiner would then have properly found that Appellant's objective evidence of non-obviousness as reflected in the unexpected results obtained by the presently claimed

invention outweigh the other factors cited by the Examiner in support of a finding of obviousness.

Significantly, Appellant has explained that he has discovered an unexpected relationship between the stiffness modulus and hardness properties of the golf ball cover. Evidence of the unexpectedly advantageous properties exhibited by golf balls of the present invention is reflected in the comparative tests results shown in Tables 2-4 at pages 22-26 of the present specification. The Appellant has disclosed many comparative examples and many test examples to clearly show the unexpected results achieved by the presently claimed invention. Appellants have even included a visual diagram comparing the presently claimed invention, as defined by the claims, with the closest prior art, at page 29 of the Appeal Brief.

Appellant has performed controlled experiments wherein the golf balls of the presently claimed invention were tested for their controllability, run, shot feel, and abrasion resistance. These tests are generally accepted throughout the field of the invention.

The Examiner has not adequately addressed any of these data in the Examiner's Answer. The Examiner's Answer does not comment on these data, the numbers provided, and Appellant's detailed analysis thereof. Thus, it is believed that Appellant's analysis of the disclosure of Wu is not able to be rebutted by the Examiner. The Examiner has therefore failed to properly weight this factor against a finding of obviousness. The Examiner's unsupported conjecture must be weighed against Appellant's empirical data, including Appellant's arguments highlighting the flaws in the disclosure of Wu.

Thus, Appellant has proven to the Examiner, through objective data, that the golf ball cover of the presently claimed invention achieves unexpectedly superior results. These test results clearly demonstrate the superiority of the golf ball of the present invention, as explained in pages 27-34 of the Appeal Brief. These data and assertions have not been rebutted by the Examiner and thus must be weighed in favor of a finding of non-obviousness.

3. The Examiner has greatly oversimplified Appellant's arguments concerning Wu

Concerning the inadequate disclosure of Wu, the Examiner's Answer, at page 6, states simply that "Wu does not teach the instant invention because the stiffness range is broader than the range claimed by the applicant." This is an oversimplification of Appellant's many arguments pointing out multiple problems with the cited references.

Contrary to the Examiner's summary of Appellant's arguments, Appellant essentially argues that the cited references fail to either disclose or even suggest the advantageous relationship between Shore D and stiffness modulus which is recited in the claims as, "the stiffness modulus and shore D hardness of the cover material satisfy the following equation: $2.0 \leq A/B \leq 5.0$, $40 \leq B \leq 55$." Thus, the golf ball cover of the present invention has a Shore D hardness (B) of 40 to 55 and a ratio of the stiffness modulus (A) to the hardness (B), that is, (A/B), which falls within the range of 2.0 to 5.0, and which provides the golf ball of the present invention with an improved abrasion resistance, improved shot feel, improved flight performance and balancing controllability. (See, for instance, specification at Table 2 and page 2, line 25 to page 3, line 17).

Furthermore, it is not even possible to accurately calculate the recited values of the claimed variables based on the disclosures of the cited references since Wu fails to disclose any stiffness modulus. As already commented upon by Appellant, it would be impossible to derive a stiffness modulus for improving the controllability. Even if this value could be derived from Young's modulus, it is clear that the relationship between the stiffness modulus and the Shore D hardness could not be derived even if both references were considered in combination. The Examiner's Answer to this missing disclosure is to simply state that the hardness would "most likely" be within the range of stiffness disclosed in Wu. Such is not the proper standard for a determination of a *prima facie* case of obviousness. The Examiner is reading more into the reference than is actually disclosed and is being guided by the knowledge disclosed in Appellant's own specification to make these assumptions.

The Examiner's Answer improperly and unfairly concentrates Appellant's arguments and comments to a single, over-simplified sentence alleging that Appellant's invention is nothing more than a claim that recites a range of stiffness which is more narrow than that disclosed by the cited references. In fact, Appellant's arguments highlight many flaws in the Examiner's interpretation of the disclosure of Wu and show that one of skill in the art could not possibly have arrived at the presently claimed invention based on the disclosure of Wu, even if it were combined with the disclosure of Iwami et al. The disclosure of Iwami et al. fails to cure these fatal defects in the disclosure of Wu because Iwami et al. is not cited by the Examiner to show the critical correlation between the variables recited in the present claims which yield the

unexpected properties of the presently claimed invention. The Examiner has failed to account for this deficiency and has failed to address Appellant's detailed analysis and arguments.

That is, the Examiner's Answer falls short of explaining the missing limitations of Wu, as is emphasized by Appellant's detailed explanations of the differences between the golf ball cover disclosed by the combination of Wu and Iwami et al. and the presently claimed golf ball cover. For instance, the Examiner has referred to a Young's modulus of 5,000 to 100,000 psi (34.5 MPa according to the Examiner) and a Shore D hardness of 51 to 58 in Wu, and argues that a modulus of at least 102 to 116 MPa would satisfy a ratio of the modulus to the hardness of 2.0 or more, Wu's own disclosure shows that the balls disclosed in Wu fail to perform as well as the presently claimed invention.

Even if the Young's modulus and the Shore D hardness of Wu could be applied to a golf ball cover as presently claimed, the unexpected and remarkable results of the presently claimed invention would not be achieved unless the cover were made to have a Shore D hardness of 40 to 55 and unless the ratio of the stiffness modulus to the Shore D hardness were made to be within the range of 2.0 to 5.0. However, Wu and even Iwami et al., fail to recognize this limitation or the importance thereof as related to the unexpected qualities achieved in the presently claimed invention.

Overall, the Examiner's Answer focuses on repeating the outstanding rejections instead of addressing specific arguments of record as presented by the Appellant in Appellant's Appeal Brief. Appellant has submitted lengthy discussions of the individual references (which include many fatal omissions) with various reasons as to why the appealed rejections are improper.

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Appellant is aware that the standard for obviousness has recently changed, wherein the teaching, suggestion, motivation test is a valid test for obviousness but one which cannot be too rigidly applied. See *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1395 (U.S. 2007). Thus, case law cited in the Appeal Brief may have been overturned due to the Supreme Court decision (see, e.g., the reference to *In re Vaeck* at pages 12 and 18; the reference to *Merck v. Biocraft* at page 27). However, it is believed that most of the Appeal Brief is otherwise in compliance with current U.S. patent law and practice.

In summary, Appellant does not concede that a *prima facie* case of obviousness has been established for any of the appealed rejections; and unexpected results and commercial success exist for the claimed invention. Despite the Examiner's Answer, Appellant respectfully maintains the outstanding rejections under 35 U.S.C. § 103 should be reversed. The Examiner has not given sufficient and proper reasons as to why the skilled artisan, confronted with the same problems as the inventor *and with no knowledge of the claimed invention*, would select the elements from the cited prior art references for a combination(s) in the manner claimed. Further, the experimental data of record shows that the results that are unexpected and more than what could be predicted.

Conclusion

For the reasons advanced above, it is respectfully submitted that all claims on appeal in this application are allowable. The Examiner's Answer has not sufficiently rebutted Appellants' position.

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Accordingly, favorable consideration and reversal by the Honorable Board of Patent Appeals and Interferences of the Examiner's rejections under 35 U.S.C. § 103(a) of claims 1, 2, 4, 6, 7, 9 and 11-16 are respectfully solicited. The rejections of the Examiner are without basis, and should be reversed.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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